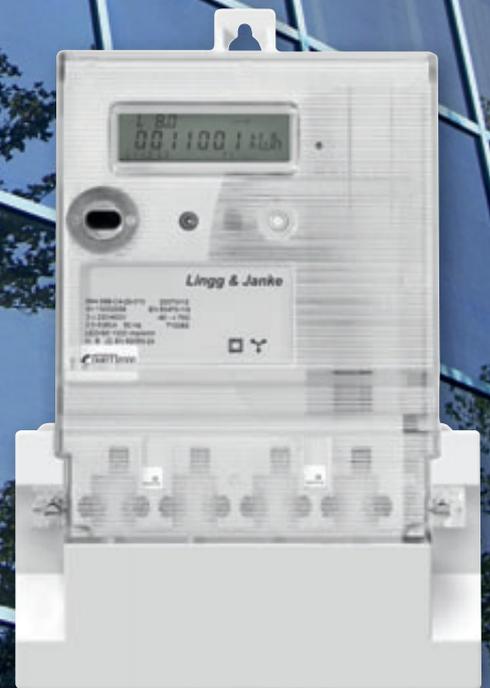


FacilityWeb®

Improved cost control  
and transparency



## From the simple meter ...



## Smart meters

Rising energy costs, environmental and climate protection issues, and commercial feasibility call for more transparency in energy consumption. Annual energy bills do not provide detailed information on the energy usage and costs of individual appliances. Smart meters measure the energy consumption of each appliance, be it electricity, gas water or heat. Based on this accurate information, you can maximize energy-saving potential and control your energy bills.



## ... to FacilityWeb, for improved cost control and transparency

Smart Metering is much more than mere recording of consumption data for energy bills. With the feedback provided by smart meters, you can implement well-directed measures to control and reduce your energy consumption. Smart metering with FacilityWeb is based on the worldwide KNX standard providing consistent and uniform communication between TCP/IP networks and KNX bus devices. FacilityWeb turns every KNX bus subscriber into a web server capable of measuring, visualizing and controlling the energy consumption of the individual appliance.

### The advantages

- Low power consumption of the bus coupling unit (150 mW)
- Bus coupling units are reasonably priced
- Nearly the same functional range as „large“ web servers
- Easy to implement as all functions are ready for operation
- Only little amount of planning required
- Every bus coupling unit has its own home page
- End users don't need additional software

```

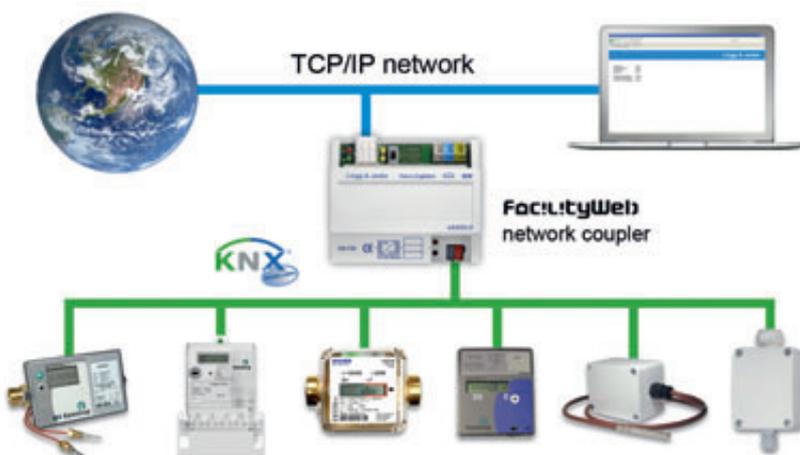
Energy E-Meter 382/162      Serial No. 001480324
Meter No. 001480324
Energy E33BC              Page: Addr.: 01.02.033

-----
1: active Energy A24 (kWh)
2: active Energy A23 (kWh)
3: reactive Energy E22 (kvarh)
4: reactive Energy E24 (kvarh)
5: 1/4h diff. active Energy (Wh)
6: 1/4h max. Power (W)
7: Tariff Number (1..8)
8: Meter Status (0=ERR, 1=OK)

-----
14.03.10 00:00 0002229 0000000 0000303 0000156 124 3442 2 1
14.03.10 00:15 0002229 0000000 0000303 0000156 134 3246 2 1
14.03.10 00:30 0002229 0000000 0000303 0000156 101 4312 2 1
14.03.10 00:45 0002230 0000000 0000303 0000156 91 3472 2 1
14.03.10 01:00 0002230 0000000 0000303 0000156 120 759 2 1
14.03.10 01:15 0002230 0000000 0000303 0000156 90 420 2 1
14.03.10 01:30 0002230 0000000 0000303 0000156 114 701 2 1
14.03.10 01:45 0002230 0000000 0000303 0000156 117 5239 2 1
14.03.10 02:00 0002230 0000000 0000303 0000156 128 3002 2 1
14.03.10 02:15 0002230 0000000 0000304 0000156 131 714 2 1
14.03.10 02:30 0002230 0000000 0000304 0000156 122 535 2 1
14.03.10 02:45 0002231 0000000 0000304 0000156 134 873 2 1
14.03.10 03:00 0002231 0000000 0000304 0000156 185 9472 2 1
14.03.10 03:15 0002231 0000000 0000304 0000156 143 948 2 1
14.03.10 03:30 0002231 0000000 0000304 0000156 104 440 2 1
14.03.10 03:45 0002231 0000000 0000304 0000157 125 770 2 1
14.03.10 04:00 0002231 0000000 0000304 0000157 111 700 2 1
14.03.10 04:15 0002231 0000000 0000304 0000157 108 471 2 1
14.03.10 04:30 0002231 0000000 0000304 0000157 120 844 2 1
14.03.10 04:45 0002231 0000000 0000304 0000157 174 054 2 1
14.03.10 05:00 0002231 0000000 0000304 0000157 147 754 2 1
14.03.10 05:15 0002231 0000000 0000304 0000157 144 611 2 1
14.03.10 05:30 0002231 0000000 0000304 0000157 121 471 2 1
14.03.10 05:45 0002231 0000000 0000304 0000157 100 700 2 1
    
```

## Consumption logging

The meters are equipped with a KNX interface that supports FacilityWeb technology. The values from the bus subscriber are made available via the NK-FW network coupler using HTTP/FTP. Every 15 minutes the meter reading is automatically saved into a file inside the bus coupling unit. The consumption data is stored for one year and can be called up at any time - there is thus no need for external logging facilities. The consumption data is protected against unauthorized access by a password.



FacilityWeb connect meters for all energy sources, be it electricity, gas, water or heat, and is independent of billing and data management systems.

## Connectivity

The NK-FW network coupler from Lingg & Janke connects the KNX installation bus to the Intranet/Internet. Communication with the KNX bus devices can then be established with any standard web browser based on HTTP/FTP. The data can be transmitted over UMTS, GPRS, GSM, ISDN, LAN, WLAN, PLC or KOAX networks. It is therefore possible to read out the consumption data collected by electronic meters as well as switching states and sensor values. Due to the bidirectional communication capability of FacilityWeb, you can operate switches directly from the user interface of your web browser. With FacilityWeb, you can initiate a variety of service and control tasks from any location - all you need is a PC with network connection and a web browser.



## Energy monitoring

Clearly structured visualization of energy usage is vital for the acceptance of necessary energy saving measures and changes in consumer behaviour. With FacilityWeb, you can read out the required data at any time using a standard Internet browser. You can make use of graphical visualization tools such as HomeCockpit to process the acquired energy information for presentation in daily, monthly or yearly evaluation reports. House owners or facility managers now have the possibility to monitor energy consumption continuously and respond with adequate energy saving measures, such as reducing peak energy consumption to benefit from different tariffs at different times of the day.

## Accessing the stored data

The consumption data stored in the meters can be easily read out via the network coupler using the HTTP protocol and a web browser. All you need to do is enter the IP address of the NK-FW network coupler, the physical address of the meter, and of course the correct password. Every meter has its own browser window displaying the consumption and performance data of the metered consumers.

## Applications

- Instantaneous consumption indication
- Storage of meter values
- Long-term data recording (e.g. of temperature characteristics)
- Further processing of the energy data (e.g., with Microsoft Excel®)
- Data read-out and representation in standard web browser
- Usage of data for consumption billing
- Remote diagnosis



## Control with FacilityWeb

The availability of load-varying tariffs or time-of-use rates in the future will be an incentive for customers to reduce the peak energy consumption of their consumers and maximize energy-saving potential. With FacilityWeb, household appliances such as water heaters, washing machines, dish washers or freezers can be linked with the electronic meter so that they automatically switch to

the low tariff rate when the corresponding tariff signal is transmitted. Consumers and building equipment can be switched on/off according to the temperature information, window position and current performance data provided through the KNX network - both from a central point or from any location at any time via web browser or Smartphone.



**KNX** is approved as International Standard (ISO/IEC 14543-3), European Standard (CENELEC EN 50090 and CEN EN 13321-1), and Chinese Standard (GB/Z 20965).

**KNX** is a cross-trade platform for all applications in home and building control - from heating, lighting and blind control to ventilation and security systems.

Based on the open **FTP over KNX** standard, smart meter solutions for efficient consumption measurement and analysis can be easily implemented to monitor energy usage and control energy costs.

**Lingg & Janke** supplies innovative products and system solutions for more efficiency, security and installation flexibility in both residential and commercial buildings.

## FacilityWeb®

Based on FTP over KNX, FacilityWeb turns every bus subscriber into a web server capable of measuring, visualizing and controlling energy consumption in real time.

### The advantages

- Low power consumption of the bus coupling unit (150 mW)
- Bus coupling units are reasonably priced
- Nearly the same functional range as „large“ web servers
- Easy to implement as all functions are ready for operation
- Only little amount of planning required
- Every bus coupling unit has its own home page
- End users don't need additional software

FacilityWeb is a registered trademark of Lingg & Janke. It provides highly effective functions for measuring, visualizing and controlling the consumption of different energy sources via Intranet or Internet. The consumption data is transmitted over the KNX bus via a network coupler to a web page where consumers can be switched on or off directly via the web browser's user interface. Commissioning engineers, house owners or facility managers are now able to obtain operational information or meter readings of the devices from any location via Intranet/Internet. Moreover, energy savings can easily be made during daily operations. FacilityWeb can be used for all types of energy sources.

### New! KNX IP-Switches

KNX IP-Switches from Lingg & Janke can be used with FacilityWeb to create virtual pushbuttons that can be displayed and operated from a web browser.

Further information at:  
[www.Lingg-Janke.de](http://www.Lingg-Janke.de)



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